

**United States Department of the Interior****BUREAU OF LAND MANAGEMENT**

Utah State Office
P.O. Box 45155
Salt Lake City, UT 84145-0155
<http://www.blm.gov>

**JUL 17 2006**

IN REPLY REFER TO:

3482

UTU-84198

(UT-923)

Canyon Fuel Company, LLC
c/o Ark Land Company
HC 35 Box 380
Helper, Utah 84526
Attn: Mark Bunnell

Re: Approval of Minor Coal Exploration Plan for License UTU-84198, Muddy Creek Area,
Sanpete and Sevier Counties, Utah

Dear Mr. Bunnell,

On December 2, 2005, BLM received an Application for Federal Minor Coal Exploration License, and its associated plan to conduct coal exploration activities in the Muddy Creek area approximately twelve miles northwest of Emery, Utah. Ark Land Company, a subsidiary of Arch Coal, Inc., proposed to drill five exploration holes within unleased Federal coal lands, which initiated this Federal action. Ark Land Company wants to obtain additional coal characteristic data for the coal in the Muddy Creek area, which could be used to support their Lease By Application (LBA), received October 2005, should the coal resources prove viable. The plan was revised in May 2006 to include access from Federal Coal Exploration License UTU-82202, and from within the adjacent Utah School and Institutional Trust Land Administration (SITLA) coal tract (ML-49443), both issued to Ark Land/Canyon Fuels Company. A copy of the revised plan is attached.

An Environmental Assessment (EA), analyzing the plan and connected actions, was prepared and it was determined that no significant impacts should be expected. A Finding Of No Significant Impact (FONSI) / Decision Record (DR) was completed, identifying the terms and conditions (stipulations) for approval (attached). The Manti-La Sal National Forest has concurred to approval of this plan.

As provided in 43 CFR 3482.2 (a)(1), BLM approves the requested exploration plan for U-84198 in accordance to the terms and the stipulations set forth in the FONSI/DR. An exploration license will be issued for the exploration in the unleased Federal coal lands in accordance with 43 CFR 3410, subject to the same terms and stipulations.

RECEIVED**JUL 19 2006**

DIV. OF OIL, GAS & MINING

This decision may be appealed to the Interior Board of Land Appeals (IBLA), Office of the Secretary, in accordance with the regulations contained in 43 CFR Part 4, and the enclosed Form 1842-1. If an appeal is taken, your notice of appeal must be filed in this office (at the above address) within 30 days from receipt of this decision. The appellant has the burden of showing that the decision appealed from is in error.

JAMES F KOHLER

Chief, Branch of Solid Minerals

Enclosure

1. Ark Land Company, Application For Federal Minor Coal Exploration License
(Revised May 31, 2006)
2. BLM FONSI/DR for EA-UT-923-06-002
3. Form 1842-1

cc: District Ranger, Ferron/Price Ranger District, Manti-La Sal National Forest
Forest Supervisor, Manti-La Sal National Forest
Director of Mining, Utah Division of Oil Gas and Mining
Field Office Manager, Price Field Office

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

INFORMATION ON TAKING APPEALS TO THE INTERIOR BOARD OF LAND APPEALS

DO NOT APPEAL UNLESS

1. This decision is adverse to you,
AND
2. You believe it is incorrect

IF YOU APPEAL, THE FOLLOWING PROCEDURES MUST BE FOLLOWED

- | | |
|----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. NOTICE OF APPEAL..... | A person served with the decision being appealed must transmit the notice of appeal in time for it to be filed in the office where it is required to be filed within 30 days after the date of service. If a decision is published in the FEDERAL REGISTER, a person not served with the decision must transmit a notice of appeal in time for it to be filed within 30 days after the date of publication (43 CFR 4.411 and 4.413). |
| 2. WHERE TO FILE NOTICE OF APPEAL.....

WITH COPY TO SOLICITOR... | Bureau of Land Management, Utah State Office, P. O. Box 45155, Salt Lake City, Utah 84145-0151 or
Bureau of Land Management, Utah State Office, 440 West 200 South, Suite 500, Salt Lake City, Utah 84101
and
Regional Solicitor, Room 6201, 125 South State Street, Salt Lake City, Utah 84111 |
| 3. STATEMENT OF REASONS

WITH COPY TO SOLICITOR..... | Within 30 days after filing the Notice of Appeal, File a complete statement of the reasons why you are appealing. This must be filed with the United States Department of the Interior, Office of Hearings and Appeals, Interior Board of Land Appeals, 801 N. Quincy Street, MS 300-QC, Arlington, Virginia 22203. If you fully stated your reasons for appealing when filing the Notice of Appeal, no additional statement is necessary (43 CFR 4.412 and 4.413).

and
Regional Solicitor, Room 6201, 125 South State Street, Salt Lake City, Utah 84111 |
| 4. ADVERSE PARTIES..... | Within 15 days after each document is filed, each adverse party named in the decision and the Regional Solicitor or Field Solicitor having jurisdiction over the State in which the appeal arose must be served with a copy of: (a) the Notice of Appeal, (b) the Statement of Reasons, and (c) any other documents filed (43 CFR 4.413). If the decision concerns the use and disposition of public lands, including land selections under the Alaska Native Claims Settlement Act, as amended, service will be made upon the Associated Solicitor, Division of Land and Water Resources, Office of the Solicitor, U.S. Department of the Interior, Washington, D.C. 20240. If the decision concerns the use and disposition of mineral resources, service will be made upon the Associated Solicitor, Division of Mineral Resources, Office of the Solicitor, U.S. Department of the Interior, Washington, D.C. 20240. |
| 5. PROOF OF SERVICE..... | Within 15 days after any document is served on an adverse party, file proof of that service with the United States Department of the Interior, Office of Hearings and Appeals, Interior Board of Land Appeals, 801 N. Quincy Street, MS 300-QC, Arlington, Virginia 22203. This may consist of a certified or registered mail "Return Receipt Card" signed by the adverse party (43 CFR 4.401(c)). |
| 6. REQUEST FOR STAY..... | Except where program-specific regulations place this decision in full force and effect or provide for an automatic stay, the decision becomes effective upon the expiration of the time allowed for filing an appeal unless a petition for a stay is timely filed together with a <i>Notice of Appeal</i> (43 CFR 4.21). If you wish to file a petition for a stay of the effectiveness of this decision during the time that your appeal is being reviewed by the Interior Board of Land Appeals, the petition for a stay must accompany your notice of appeal (43 CFR 4.21 or 43 CFR 2804.1). A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of the <i>Notice of Appeal</i> and Petition for a Stay must also be submitted to each party named in this decision and to the Interior Board of Land Appeals and to the appropriate Office of the Solicitor (43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Standards for Obtaining a Stay. Except as other provided by law or other pertinent regulations, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards: (1) the relative harm to the parties if the stay is granted or denied, (2) the likelihood of the appellant's success on the merits, (3) the likelihood of immediate and irreparable harm if the stay is not granted, and (4) whether the public interest favors granting the stay. |

Unless these procedures are followed your appeal will be subject to dismissal (43 CFR 4.402). Be certain that all communications are identified by serial number of the case being appealed.

NOTE: A document is not filed until it is actually received in the proper office (43 CFR 4.401(a)). See 43 CFR Part 4, subpart b for general rules relating to procedures and practice involving appeals.

**FINDING OF NO SIGNIFICANT IMPACT
AND
DECISION RECORD**

**Application for Federal Minor Coal Exploration License;
Muddy Creek Area Coal Exploration (UTU-84198)**

EA No. UT-923-06-002

Finding of No Significant Impact:

Based on the analysis of the Proposed Action (selected alternative) and the potential environmental impacts analyzed in the attached environmental assessment (EA), I have determined that the selected alternative would have no significant impacts on the human environment considering the context and intensity of impacts per 40 CFR 1508.27 (Ten Significance Criteria). An environmental impact statement is therefore not required.

Significance, as used in NEPA, defines and requires consideration of both context and intensity. Context means the significance of the action must be analyzed in several contexts such as the affected region, interests, and locality. Intensity refers to the severity of the impacts disclosed in the analysis.

Context: Coal mining and related activities have been intensive and common on the Wasatch Plateau since the late 1800s; county and city governments and local residents are accustomed to these activities and their environmental, social, and economic effects. The potential environmental effects on affected surface resources are local in scope, that is, the effects are limited to the Quitchupah and Muddy Creek drainages. Social and economic effects are also local in scope, primarily involving Sevier, Sanpete, and Emery Counties. However, indirect economic effects are distributed elsewhere as a function of sale and transport of the coal or generated electrical power.

This decision is local in effect; short-term compared to more than 100 years of history of contemporary human activities in the area, and would not negatively affect city and county governments. Therefore, in context, this decision is not significant.

Intensity: Intensity is evaluated by comparing and contrasting the following ten criteria (**in bold**) from 40 CFR 1508.27 with the issues and effects disclosed in the EA and project file.

1. "Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial."

The selected alternative would create an important beneficial impact of allowing for the continued evaluation of currently unleased Federal coal. The selected alternative would enable Ark Land/Canyon Fuel to obtain additional coal characteristic data for the coal in

the Muddy Creek area. This data could be used to support a Federal Lease by Application (LBA) and the leasing process, should the coal resources prove viable. Future leasing of Federal coal could ensure the viability of the adjacent SUFCO Mine, if Ark Land/Canyon Fuel is the successful bidder, creating jobs and economic health for local communities. Under the selected alternative, there would be no significant impacts on non-mineral resources. Neither the beneficial nor negative impacts are extraordinary. The impacts and benefits are typical and reasonable for underground coal exploration and associated activity on the Wasatch Plateau.

2. "The degree to which the proposed action affects public health or safety."

Under the selected alternative, lease stipulations are used to protect water resources, as well as outlining fire prevention precautions and fire fighting capabilities, and ensuring that all waste is contained and disposed of within authorized areas. Collectively, these stipulations would minimize potential risk to human health and safety.

3. "Unique characteristics of the geographical area such as proximity to historical or cultural resources, park lands, or prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas."

No significant historical or cultural resources would be affected (Archaeology report conducted in 2005 and 2006, SHPO concurrence, and Tribal consultation documents are in the project file.). Prime or Unique Farmland does occur within or near the exploration area. Disturbed and impacted areas associated with the project would not be located within or adjacent to floodplains, eligible or designated wild or scenic rivers, or ecologically critical areas

4. "The degree to which the effects on the quality of the human environment are likely to be highly controversial."

Mining and on-going coal exploration in the area has shown that the coal exploration, using the wireline drilling method, and the protection provided by lease stipulations developed for exploration activities allow coal exploration without significant impact on the non-coal resources within the area. Effects are well known from previous, similar activities.

5. "The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks."

Coal exploration and mining have been a common and important element of the local economy and culture since the late 1800s. The impact of the exploration of underground coal resources on the Forest Service (FS) have been observed and monitored for many years, and the possible effects and risks are well understood. Enhanced understanding of the local ecosystems and selection of the alternative to maximize environmental

protection ensures that the human environment would not be effected by unique or unknown risks.

6. "The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration."

The Manti-La Sal Land and Resource Management Plan (LRMP), as amended, made the area available for further consideration for coal leasing, and made findings relative to unsuitability criteria. Coal exploration for evaluation of coal resources to facilitate leasing of specific tracts is authorized on a case-by-case basis, and environmental analyses are completed based on site-specific information. Coal exploration has been and is being performed in this area; therefore exploration of this unleased coal is not precedent-setting. Though considered, this action would not influence future decisions associated with leasing of Federal coal and surface management of resources by the FS.

7. "Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts."

While the selected alternative would take place independent of any other action, it would be implemented concurrent with additional mining activities in areas near and adjacent to the exploration license area. Mining exploration and operations would be occurring adjacent to the exploration license area on the UTU-82202 tract to the north; the SITLA tract to the east; and the Quitchupah Federal coal lease (UTU-63214) near the southern border of the exploration license area. The data gathered during implementation of this coal exploration would be used to evaluate the potential of obtaining other coal resources through the LBA process(s). On October 13, 2005, BLM received an application from Ark Land Company to lease Federal coal in the area of UTU-82202 and the UTU-84198 (the exploration license area). Any future projects in the exploration license area may require further analysis including analysis of cumulative impacts. Upon delineation of the Federal coal tract, per the LBA filed, an independent NEPA analysis would be required.

Under the selected alternative, cumulative impacts were assessed and they were determined to be minimal.

8. "The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historic resources."

No known structures, objects, or other resources, on or adjacent to the lease tract are listed or are eligible for the National Register of Historic Places. No significant heritage resources would be affected by the action. A coal lease stipulation provides a measure to protect heritage resources in case they are unexpectedly encountered.

9. "The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973."

The Biological Evaluation/Biological Assessment completed for this project has a "no effect" determination. Because of the "no effect" determination, consultation with the U.S. Fish and Wildlife Service is not required.

10. "Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment."

The analysis did not identify any adverse effects that threaten a violation of Federal, State or local laws designed to protect the environment.

Decision:

It is my decision to grant approval to Ark Land/Canyon Fuel's exploration plan, and to issue an exploration license for the exploration in unleased Federal coal lands, UTU-84198, as described in the Proposed Action (Alternative A) of EA-UT-923-06-002. Ark Land, a subsidiary of Arch Coal, Inc., on behalf of Canyon Fuel, SUFCO Mine, would drill five exploration drill holes with existing and new access within Sanpete and Sevier Counties, Utah. This Exploration Plan, referred to as the selected alternative (Proposed Action), would be conducted to evaluate subsurface coal resources administered by the BLM Utah State Office. Surface access and drilling would be conducted on National Forest System lands, administered and managed by the Manti-La Sal National Forest.

I have determined that granting approval to conduct this exploration plan is in the public interest. This decision is contingent upon meeting all stipulations and monitoring requirements listed below. An appeal of this decision can be filed in accordance with the regulations contained in 43 CFR Part 4. Based on the analysis of potential environmental impacts contained in the attached environmental assessment, I have determined that the action would have no significant impact on the human environment and an environmental impact statement is therefore not required.

Stipulations / Monitoring: Operations would be conducted under the authority of an exploration license to be issued by the BLM. The USFS Manti-La Sal National Forest (FS) is responsible for any approvals not authorized by the exploration license. In emergency situations where the operator's activity is likely to imminently endanger public health or safety, life, or property, or to cause irreparable damage to resources, the

FS may issue an emergency order to correct the situation. If this should happen, the FS will immediately notify the appropriate BLM office, at which time the BLM will exercise its jurisdiction over the operator's activities within the exploration license area. If there is an emergency, both agencies will coordinate the implementation of corrective actions. The following stipulations (developed through consultation with the FS) and monitoring requirements apply to this project only:

1. A pre-work meeting including the responsible company representative(s), contractors, the BLM, Utah Department of Oil Gas and Mining (DOGM), and the Manti-La Sal National Forest shall be conducted at the project location prior to commencement of operations. Site-specific FS requirements will be discussed at this time.
2. A Road Use Permit shall be obtained from the FS before equipment is transported onto National Forest System lands.
3. All surface disturbing activities including reclamation shall be supervised by a responsible representative of the permittee/licensee who is aware of the terms and conditions of the projects permits/licenses. A copy of the appropriate permits/licenses must be available for review at the project site at all times during operation.
4. The Authorized Officer shall be notified 48 hours in advance that heavy equipment will be moved onto National Forest System lands and that surface disturbing activities will commence.
5. Establishment of campsites on National Forest System lands in support of this project will be authorized by the FS under a Special Use Permit.
6. The Authorized Officer shall be notified of any proposed alterations to the plan of operations, and the alterations shall be approved prior to commencement.
7. Fire suppression equipment shall be available to all personnel working at the project site. Equipment shall include at least one hand tool per crew member consisting of shovels and pulaskis and one properly rated fire extinguisher per vehicle and/or internal combustion engine.
8. All gasoline, diesel, and steam-powered equipment shall be equipped with effective spark arrestors or mufflers. Spark arresters shall meet FS specifications discussed in the "General Purpose and Locomotive Spark Arrester Guide, Volume 1, April, 1988"; and "Multi-position Small Engine Spark Arrester Guide, April, 1989". In addition, all electrical equipment must be properly insulated to prevent sparks.
9. The permittee/licensee will be held responsible for damage and suppression costs for fires started as a result of operations. Fires must be reported to the FS as soon as possible.

10. Operations may be suspended during periods of high fire danger.
11. Water needed in support of operations shall be properly and legally obtained according to Utah State water laws. The water pipe placed in Muddy Creek will have a screen placed around the intake to prevent fish from being drawn into it.
12. Unauthorized off-road motorized travel, other than along the approved access routes, is prohibited. Travel shall be in accordance with the Manti LaSal National Forest travel plan and terms and conditions of the Road Use Permit.
13. Section corners or other survey markers, including claim corners, in the project area must be located and flagged for preservation prior to commencement of surface disturbing activities. The removal, displacement, or disturbance of markers must be approved by the proper authority. Replacement will be done by the proper authority at the expense of the permittee/licensee.
14. If cultural or paleontological resources are discovered during operations, all operations which may result in resource disturbance must cease and the Authorized Officer notified of the discovery.
15. Gates shall be closed after entry/exit unless otherwise specified.
16. The permittee/licensee will be held responsible for all damage to fences, cattleguards, resource improvements, roads, and other structures on National Forest System lands which result from their operations. The Authorized Officer must be notified of damages as soon as possible.
17. Operations shall be coordinated with grazing permittees to prevent conflicts.
18. Harrassment of wildlife and livestock is prohibited.
19. Topsoil (soil "A" horizon) shall be stripped from excavated areas and stockpiled for use during reclamation. Topsoil stockpiles will be located to minimize contamination or loss. Subsoil and rock material will be stockpiled seperately.
20. All drilling fluids, mud, and cuttings shall be contained and properly disposed of prior to reclamation.
21. During drilling operations all trash, garbage, and other refuse shall be properly contained on the project site prior to disposal at authorized sites.
22. All significant water encountered during drilling shall be reported to the Authorized Officer, including the depth and formation at which it was encountered, and an estimate of the flow.

23. If any of the drill holes encounter artesian groundwater flow, the Authorized Officer shall be notified prior to plugging the hole. The operator may be required to establish a permanent water development at the site.
24. All drill holes shall be plugged in accordance with Federal and State regulations.
25. The permittee/licensee shall clean up and remove all drilling equipment, trash, garbage, flagging, vehicles, and other such materials from National Forest System lands.
26. Disturbed areas shall be reclaimed by the end of the field season.
27. Drill rigs and heavy equipment (not including water trucks) shall not be transported in or out of the project area during the opening weekend of the general elk hunt nor during the opening weekend of the general deer hunt and during holiday weekends.
28. Contaminated soil and gravel shall be stripped and hauled off National Forest System lands prior to site reclamation.
29. Drill sites shall be reclaimed by selectively backfilling excavated materials, topsoil last, such that the disturbed area is replaced to its approximate original contour. The disturbed area must be seeded with the specified seed mix.
30. Upon completion of the project, compacted soils (access routes, staging areas, camping areas) shall be scarified and seeded with the specified seed mix.
31. All disturbed drainages shall be replaced to their approximate original configuration when the project area is reclaimed.
32. The reclaimed roads shall be signed and blocked off to discourage vehicle access by the public.
33. Reclamation efforts shall be diligently pursued to insure that a minimum ground cover is established on all disturbed areas which is equal to or greater than the surrounding undisturbed areas. Revegetation will be considered successful when 90 percent of the predisturbance ground cover is re-established over the entire disturbed area, with no noxious weeds. Adjacent undisturbed areas will be used as a basis for comparison of ground cover. Of the vegetative ground cover, at least 90 percent must consist of seeded or other desirable species. The 90 percent of pre-disturbance ground cover must be maintained for three years.

34. The seed mix to be used for reclamation will be as follows:

<u>Pounds of Live Seed Per Acre</u>		<u>Pounds</u>
Western Wheatgrass	<i>Elymus smithii</i>	2
Basin Wild Rye	<i>Elymus cinereus</i>	1
Intermediate Wheatgrass	<i>Elymus hispidus</i>	2
"Rambler" Alfalfa	<i>Medicago sativa</i>	1
Blue Leaf Aster	<i>Aster glaucodes</i>	0.25
Lewis Flax	<i>Linum lewisii</i>	0.50
Small Burnet	<i>Sanguisorba minor</i>	1
Silvery Lupine	<i>Lupinus argenteus</i>	1
True Mahogany	<i>Cercocarpus montanus</i>	1
Bitterbrush	<i>Purshia tridentata</i>	1
Sagebrush	<i>Artemisia tridentata vaseyana</i>	1

This seed mix shall be 99 percent pure live seed containing a maximum of one percent weeds, none of which are noxious.

35. The permittee/licensee shall take all reasonable and appropriate measures to prevent the introduction and proliferation of exotic plants and/or noxious weeds for all operations on the land surface. Heavy equipment, drilling equipment, and all transport vehicles shall be cleaned prior to entering the FS. The permittee/licensee will be held responsible for control and eradication of exotic species and noxious weed infestations found to be a result of this project, until the Authorized Officer is notified by the surface management agency that vegetative restoration is acceptable.
36. The permittee/licensee shall pay the marketable value for any timber cut during the project.
37. Outside berms will not be constructed on any roads.
38. Stipulation for Lands of the National Forest System Under Jurisdiction of the Department of Agriculture:

The licensee/permittee/lessee must comply with all the rules and regulations of the Secretary of Agriculture set forth at Title 36, Chapter II, of the Code of Federal Regulations governing the use and management of the National Forest System (NFS) when not inconsistent with the rights granted by the Secretary of the Interior in the license. The Secretary of Agriculture rules and regulations must be complied with for (1) all use and occupancy of the NFS prior to approval of a permit/operation plan by the Secretary of the Interior, (2) uses of all existing improvements, such as Forest Development Roads, within and outside the area licensed, permitted or leased by the Secretary of the Interior, and (3) use and occupancy of the NFS not authorized by a permit/operating plan approved by the Secretary of the Interior.

All matters related to this stipulation are to be addressed to:

Forest Supervisor
Manti-La Sal National Forest
599 West Price River Drive
Price, Utah 84501

Telephone No. (435) 637-2817

who is the authorized representative of the Secretary of Agriculture.

39. Upon completion of operations, the temporary access routes shall be ripped and seeded. Barriers consisting of roughened surface, rocks, logs, and earthen berms shall be placed to preclude future unauthorized traffic.
40. Project operations will be restricted to the period between June 15 and November 1 to avoid effects on wildlife.
41. Roads must not be used when they are wet and susceptible to damage.
42. The permittee is responsible for repair of any damages to roads caused by his operations.
43. All traffic must maintain safe speeds commensurate with existing conditions.
44. Roads must be watered if dust becomes a problem or if excessive loss of road material occurs.

Rationale:

The decision to approve the exploration plan and issue an exploration license has been made in consideration of the environmental impacts of the selected alternative. The BLM is responsible for administration of Federal coal under the Mineral Leasing Act of 1920, as amended. The selected alternative is regulated under 43 CFR 3480, Coal Exploration and Mining Operations Rules; General. An exploration license is required under 43 CFR 3410. It is consistent with the Sanpete and Sevier County Master Plans that recognize production of mineral resources as an important use of lands within the Counties. The area is located within the BLM Price Field Office area, and subsurface Federal coal reserves are to be managed in accordance with the goals and objectives for coal management in the San Rafael Resource Management Plan (RMP, 1991), which amended the Forest Management Framework Plan (MFP, 1977) for the Sevier River Resource Area, with oversight and direction from BLM. The surface area is Manti-La Sal National Forest, and the surface management prescriptions are administered under the Land and Resource Management Plan (LRMP), Manti-La Sal National Forest Plan, 1986

as amended. The proposal conforms to the management prescriptions assigned to these areas with stipulations addressed above.

The No Action Alternative (Alternative B) was not selected because it would not allow exploration to occur, and would limit Ark Land/Canyon Fuel's ability to obtain coal characteristic data in unleased Federal coal lands. Without this data, coal resources that could be open for lease may not be sought, as allowed for in 43 CFR 3425, resulting in potential loss of revenue for the public, 43 CFR 3422.

Two resources were identified as having a potential for impact; Lands and Access and Inventoried Roadless Areas (IRAs). These issues were identified in Chapter 1, and further analyzed in Chapters 3 and 4 of the environmental assessment. Two of the drill sites would be accessed through existing FS roads, while the other three drill sites would be accessed by temporary roads. Since no permanent roads would be constructed for development of the project, long-term access management would not be impacted by the project. Likewise, operations during the drilling activities would not interfere with access. The operator would be required to have a road use permit in place prior to beginning operations and a bond would be required as part of the permitting process to insure that any damage to the roads is repaired. Elimination and reclamation of unauthorized trails and roads within and surrounding the project area would mitigate the impact of temporary roads construction for the project. Reclamation of these unauthorized roads and trails would benefit FS surface management needs in this area.

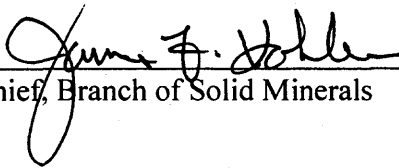
The exploration area is partially located within the proposed White Mountain IRA. The area was considered for wilderness in RARE II and allocated to non-wilderness uses in the Forest Plan. The temporary access roads associated with the exploration project may result in a moderate short-term adverse impact to the character and values of the proposed IRA. Though temporary access roads would be immediately reclaimed upon completion of drilling activities, minimal to moderate impacts to the low rated wilderness attributes of the White Mountain IRA such as natural integrity, apparent naturalness, remoteness, opportunities for solitude, and manageability, as well as medium rated wilderness attributes for primitive recreation opportunities and challenging experiences may occur. These short-term adverse impacts would be mitigated by immediate access elimination and reclamation of access development, as well as additional mitigation associated with the elimination and reclamation of unauthorized trails to E-O5, A-O6, and a short (approximately 600 foot) unauthorized trail intersecting NFT 025 near C-06. Restoration of these three existing unauthorized trails would benefit character and value, and FS management within this portion of the IRA.

Ark Land/Canyon Fuels will be required to post a bond in accordance to 43 CFR 3410.3-4. Operations would not commence until bond is posted.

A Notice of Invitation To Participate in Coal Exploration License was posted in the Federal Register, Vol. 71, No. 50, on Wednesday March 15, 2006. No written requests to participate were received within the 30 day response period. This NEPA action was

6/30/06

posted under the Environmental Notification Bulletin Board process on March 20, 2006,
and this decision will be posted under this process upon execution.



Chief, Branch of Solid Minerals

6/30/2006

Date

BLM - UT - 950
2006 JUN -5 AM 9:43

EXPLORATION PLAN
(REVISED 5/31/06)
TO ACCOMPANY AN
APPLICATION FOR A FEDERAL MINOR COAL
EXPLORATION LICENSE

Muddy Creek Area
Sevier County, Utah

November 2005
(Revised May 31, 2006)

ARK LAND COMPANY
A Subsidiary of Arch Coal Inc.

RECEIVED
JUL 19 2006
DIV. OF OIL, GAS & MINING

Introduction

This exploration plan is part of an Application for a Federal Minor Coal Exploration License submitted by Ark Land Company (a subsidiary of Arch Coal Inc.) on behalf of Canyon Fuel Company, LLC, Sufco Mine to the US Department of the Interior Bureau of Land Management (BLM) as required in 43 CFR 3410. Approval is sought to conduct coal exploration and reclamation activities during the summer of 2006. The type of exploration proposed is wireline core drilling. Five drill holes are proposed in this application. All the drill sites and access routes will require surface disturbance. The BLM manages the coal resource. The surface resources in this exploration license area are managed by the U.S. Department of Agriculture Forest Service (USFS). This exploration plan is formatted to address the specific requirements of 43 CFR 3482.1 as required by 43 CFR 3410.2 and issues of concern by other agencies.

43 CFR 3482.1(a)(3)(i) - Applicant

Ark Land Company
c/o Sufco Mine
397 S 800 W
Salina, Utah 84654
Attn: Mark Bunnell (work) 435-448-2633

The applicant is the same as the operator of the proposed exploration license.
Correspondence regarding this application for exploration license should be addressed to:

Mark Bunnell
Ark Land Company
c/o Skyline Mines
HC 35 Box 380
Helper, Utah 84526 (work) 435-448-2633

43 CFR 3482.1(a)(3)(ii) - Person Present During Exploration

Mark Bunnell
Ark Land Company
c/o Skyline Mines
HC 35 Box 380
Helper, Utah 84526 (work) 435-448-2633

At times a consulting geologist may act as a representative of the applicant. The BLM and USFS will be notified of the name, address, and phone number of the consulting geologist, if one is used.

43 CFR 3482.1(a)(3)(iii) - Description of the Proposed Exploration Area

Legal Description

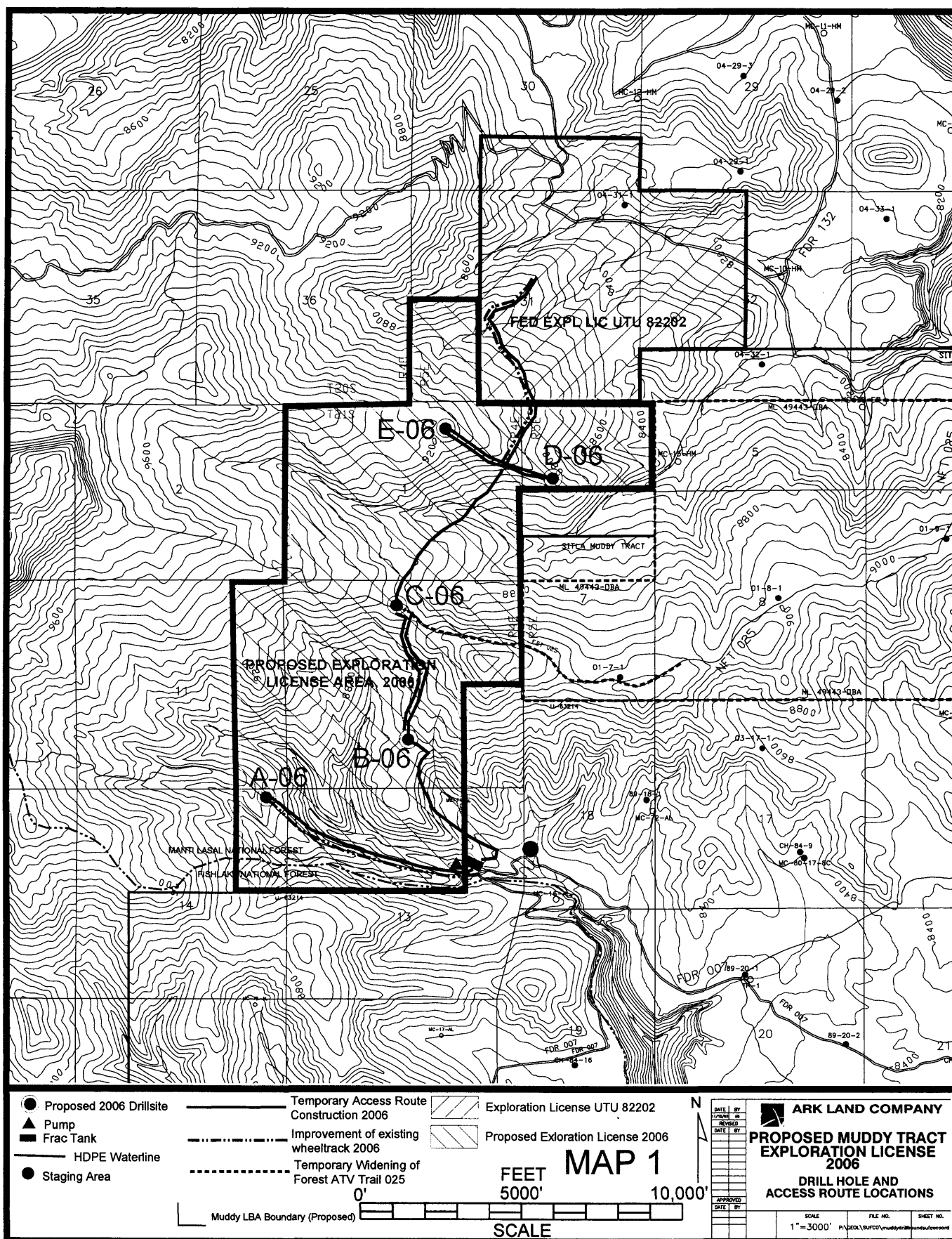
The proposed exploration license area is generally located in southeastern Sanpete County and northeastern Sevier Counties, Utah. This area involves Federal coal and surface rights in the Muddy Canyon area located approximately 12 mi. northwest of Emery, Utah and encompasses 1,848.62 acres, more or less. The coal resource is managed by the U.S. Department of the Interior, Bureau of Land Management and the surface resources are managed by the U.S. Department of Agriculture, Forest Service. Map 1 depicts the boundaries of the proposed exploration area. The area included within the license application is tabulated as follows:

T. 20 S., R. 5 E., Salt Lake Meridian	
Section 31: W1/2SW1/4	80.00 acres
T. 21 S., R. 4 E., Salt Lake Meridian	
Section 1: All	554.40 acres
Section 11: E1/2E1/2	160.00 acres
Section 12: N1/2, SW1/4, W1/2SE1/4	560.00 acres
Section 13: W1/2NE1/4, NW1/4	240.00 acres
Section 14: E1/2NE1/4	80.00 acres
T. 21 S., R. 5 E., Salt Lake Meridian	
Section 6: All	174.22 acres

Total 1,848.62 acres, more or less

No Federal or other leases are included in the exploration license area. Canyon Fuel Company holds Federal and State coal leases to the south and east of the proposed exploration license area (Maps 1 and 2). The State coal lease is part of the SITLA Muddy Tract where Canyon Fuel has leased a portion of the tract for the Upper Hiawatha coal seam.

Ark Land Muddy Creek Area Exploration License Application



Geology and Topography

The proposed exploration license area is located south of Muddy Creek Canyon (Map 1). Muddy Creek drains southeastward into the south end of Castle Valley. The area lies within the Wasatch Plateau physiographic province. The surface elevation ranges from approximately 7,400 ft to 9,700 ft in the proposed license area.

The exploration area is underlain by sedimentary rocks of late Cretaceous age. Three formations crop out in the area including the coal-bearing Blackhawk Formation as well as the overlying Price River and North Horn Formations. At least three potentially mineable coal zones occur in the area, which are in descending order the Muddy, Upper Hiawatha, and Lower Hiawatha coal zones.

Strata in the area dip uniformly from 2 to 3 degrees northwest. No major faulting is known in the proposed exploration license area, though mining in the Quitchumpah and Pines areas to the south has encountered minor faulting and fracturing.

Ark Land plans to wireline core drill through all major coal seams including at least 10 feet of floor rock beneath the deepest coal seam. Up to two of the planned five drill holes will be completed as piezometers (water monitoring wells).

No valuable minerals other than coal are known to occur within the boundary of the proposed exploration license area.

Surface Water

The proposed exploration area is drained by Muddy Creek in the north and Quitchupah Creek in the south. Both creeks belong to the San Rafael sub-basin of the Upper Colorado River Basin.

Ground Water

Significant quantities of groundwater are not expected in the proposed exploration license area to the depths drilling is planned. Significant amounts of water have not been encountered during previous drilling in the Muddy Creek area. Also, only occasional minor inflows that drip from fractures and minor fault zones in the mine roof have been encountered in the Sufco Mine to the south.

Hydrologic studies and monitoring have shown that groundwater occurs in perched zones of limited areal extent within lenticular sandstones. None of the formations from the surface down through the Blackhawk Formation comprise a laterally continuous aquifer.

Soils

The soils in the proposed exploration area are generally sandy loams. Surface horizons are commonly dark and organic rich. Subsoils are mainly loam with a high rock content. Care will be taken in locating the drill sites to ensure soil conditions will not be a limiting factor in the successful reclamation of a site. Topsoil and subsoil will be separately removed, piled, and protected when constructing the drill sites.

Erosion and Sedimentation

The activities associated with this proposed program will not adversely affect erosion or sedimentation in the area. None of the proposed drill sites occur in slump areas.

Biology

Vegetation in the proposed exploration area is comprised mostly of the conifer and sagebrush communities. The streams are not capable of supporting game fish. The exploration area is important habitat for raptors, elk, mule deer, cougar, bobcat, black bear, and small mammals. The area is also habitat for a limited number of reptiles and amphibians.

Threatened and endangered species in the exploration area include the sage grouse, bald eagle, and peregrine falcon. Exploration and reclamation activities will not occur within one half mile of known breeding and nesting areas. Site-specific raptor surveys will be conducted in the late spring/early summer to verify site locations meet this criterion. A Mexican spotted owl survey will also be conducted beginning in late spring. Ark Land Company plans to contract any required site-specific biologic surveys such as raptor and/or threatened and endangered species prior to commencement of exploration activities. This work would be accomplished in late spring/early summer 2006 upon approval of the USFS.

Historic Places

There are no known districts, sites, buildings, structures, or objects listed on, or eligible for listing on, the National Register of Historic Places in the proposed exploration area.

Cultural and Archaeological Resources

There are archaeological resources in the proposed exploration license area and in the vicinity of the support areas but none are close to the proposed drill sites, access routes, or support areas. A good listing of cultural resource inventories conducted to the east of the proposed exploration area is included in the Pines Tract Project, Final Environmental Impact Statement, section 3.8, pg. 3-152. Ark Land Company conducted site-specific archeological surveys relative to its 2004 Muddy drilling project, portions of which

include the proposed exploration area. The results of these surveys are given in report U-04-EP-0650f which is on file with the BLM, USFS, and the Utah Division of Oil, Gas and Mining (UDOGM). A site-specific cultural resources survey for this proposed exploration license area and support areas was conducted in late Fall 2005. The results will be forwarded to the BLM upon completion.

43 CFR 3482.1(a)(3)(iv) - Description of the Methods to be Used

The general method to be followed during drill hole exploration, reclamation and abandonment is: 1) prepare access routes where needed, prepare the drill sites and support areas, transport equipment and supplies to the drill sites and support areas, and setup drill equipment, 2) drill, log and plug or complete the drill holes as needed, and 3) remove equipment and water lines and reclaim the access routes, drill sites, and support areas. Exploration activities are planned for the summer of 2006.

Proposed Access Routes, Drill Site Locations, and Support Areas

Access from state and county roads to the exploration license area will be via Forest Development Roads 007 and 044. Most travel and transport will be within and adjacent to the exploration license area on Forest Development Roads 007, 044, and newly constructed temporary access routes. Truck-mounted equipment, service vehicles, pick-up trucks, ATVs, and horses will use these access routes. The width of travel will be limited to 12 ft wide where upgraded trails, roads or newly constructed access routes are used. Proper permission will be obtained to use Forest development roads and trails and to upgrade or construct temporary access routes. The proposed access routes are shown on Map 2.

The five proposed drill sites are located at the head of the North Fork of Quitchupah Canyon, north of Big Ridge, and in the Greens Canyon area. The locations were chosen to minimize surface and other impacts. The locations of the five proposed drill sites are shown on Map 2. The legal description of the proposed drill sites and their projected depths are given in Table 1.

Table 1 – Proposed Drill Site Locations and Depths		
Drill Hole	Location	Projected Total Depth
A-06	T 21 S, R 4 E, sec. 14, NE $\frac{1}{4}$ NE $\frac{1}{4}$	1,910'
B-06	T 21 S, R 4 E, sec. 12, SW $\frac{1}{4}$ SE $\frac{1}{4}$	1,760'
C-06	T 21 S, R 4 E, sec. 12, NE $\frac{1}{4}$ NW $\frac{1}{4}$	2,155'
D-06	T 21 S, R 5 E, sec. 6, SW $\frac{1}{4}$ SW $\frac{1}{4}$	1,900'
E-06	T 21 S, R 5 E, sec. 1, NW $\frac{1}{4}$ NE $\frac{1}{4}$	2,360'

The locations of two types of support areas are proposed including a staging area and a water (frac) tank/pump site. The water storage/pump sites will have one or two frac tanks to store water and a Triplex or equivalent pump. Drillsites not in use prior to reclamation

may also be utilized as staging area/water-handling sites as well. The locations of the support areas were chosen to minimize surface and other impacts and are shown on Map 2.

Construction of Access Routes and Drill Sites

The planned method to prevent possible future soil erosion is to minimize disturbance of topsoil to an approximate 12 ft. width and allowing rapid re-establishment of vegetation by reclaiming the area as soon as possible after exploration activities are concluded. Access routes and drill sites will be located to minimize the amount of surface disturbance and the support areas will be located where surface disturbance is not needed. Access routes will be on Forest Development Roads, an existing Forest Development Trail (025), an existing non-system double-track road and newly constructed temporary access routes. Forest Development Roads will be repaired where necessary. This may include grading rutted areas with a grader and hauling gravel to fill rough areas on bedrock ledges and cover sandy areas. Forest Development Trail 025 will be reopened and new temporary access routes will be constructed with a D8 Cat or equivalent. No blasting will be done when upgrading or constructing access routes. In all cases, the maximum access route width will be approximately 12 ft and the least amount of disturbance will be made while upgrading and constructing access routes. No earth or debris from road repair or access route construction will be disposed of. Map 1 shows access route segments that are along existing non-system double-track roads north of sites D-06/E-06 and east of site A-06. These double track road segments will be included in reclamation upon completion of drilling.

Drill sites will be approximately 100 ft x 100 ft in size. Vegetation will be grubbed followed by removal of the topsoil with a dozer. The minimum amount of subsoil will be removed with a dozer to make a level drill site. Mud pits measuring approximately 10 ft x 40 ft x 8 ft deep will then be excavated with a track hoe. No blasting will be done when constructing drill sites. The topsoil and subsoil will be separately stockpiled and protected from erosion by a silt fence. Brattice or a pit liner will be placed on the ground beneath the drilling rig and the edges elevated to protect the ground from leaks and spills. Small leaks will be cleaned-up with absorbent pads. Contaminated pads and rags will be hauled off the site and disposed of in an approved waste site. No hazardous material or trash will be disposed of at the drill sites. The disturbance involved in constructing access routes and drill sites is given in Table 2.

Exploration personnel will not be allowed to drive onto the area when roads or trails are excessively muddy, but may leave the area at the end of the workday or drill period. Any rutting caused by exploration personnel will be repaired when conditions permit.

Preparation of Support Areas

The support areas include the staging area and water storage/pump site. The staging area and water storage/pump locations will be prepared by minor hand leveling as needed. The ground below potential contaminants such as fuel and oil will be covered by brattice or a pitliner to contain any leaks or spills. Otherwise leaks will be cleaned-up with

Table 2 – Summary of Disturbed Areas

<u>Area</u>	<u>Surface Mgmt Agency</u>	<u>Type of Disturbance</u>	<u>Size (ft)</u>	<u>Area (acres)</u>
Drill Site A-06	USFS	Grub & excavate	100 x 100	0.23
Drill Site B-06	USFS	Grub & excavate	100 x 100	0.23
Drill Site C-06	USFS	Grub & excavate	100 x 100	0.23
Drill Site D-06	USFS	Grub & excavate	100 x 100	0.23
Drill Site E-06	USFS	Grub & excavate	100 x 100	0.23
Temp Access Route to A-06	USFS	Grub & excavate	12 x 5,785	1.59
Temp Access Route to B-06	USFS	Grub & excavate	12 x 3,422	0.94
Temp Access Route to C-06 (widening of FDT 025)	USFS	Grub & excavate	8 x 7,880	1.45
Temp Access Route to D-06/E-06 (partial existing 2 track)	USFS	Grub & excavate	12 x 7,062	1.95
Route between D-06 & E-06	USFS	Grub & excavate	12 x 2,813	0.77
Staging Area	USFS	Compaction	100 x 150	0.34
Water Storage/Pump Site	USFS	Compaction	40 x 80	0.07
Total area disturbed				8.26

absorbent pads. Contaminated pads and rags will be hauled off the site and disposed of in an approved waste site. The staging areas will be approximately 100 ft x 150 ft in size.

The water storage/pump sites will be prepared and protected in a similar manner and will be approximately 40 ft x 80 ft in size. The pump sites will not be prepared but the pump will be underlain by a pit liner or brattice.

The HDPE water lines will be laid at approximately the same time as the staging area sites and water storage/pump sites are prepared. The spools of water line will be distributed along the water line routes with pickup trucks or ATV's. Any water line route that is located away from an access route will be distributed by hand or by horse. The water line will be unspooled then dragged in place by pickup, ATV, or horse. The waterlines will be laid along existing or newly constructed temporary access routes as much as possible (Map 2). Based on conditions encountered during setup, it may become necessary to place a waterline cross country away from an access route. In this case the line will be laid and recovered on foot or with horses.

Drilling

The planned drilling method is wireline core drilling and will be done on a 24 hour per day schedule. Truck-mounted drilling rigs will be used that are approximately 10 ft X 30 ft in size. Figure 1 shows a typical drill site layout for a truck-mounted rig. The total depth of each drill hole will depend on whether it is completed as a piezometer. For those that will not be piezometers, the entire borehole will be core drilled from the surface through ten feet of the floor rock below the lowest coal seam horizon. Up to two

drill holes will be completed as piezometers and so will be drilled deeper into the upper portion of the Star Point Sandstone beneath the Lower Hiawatha seam. The projected depths of the drill holes are given in Table 1. Conductor casing will be inserted and cemented to support the soil and alluvium. Surface casing will be set in each hole to below the Price River Formation and certain other intervals depending on hole conditions. Surface casing will be 4.5 inches in diameter and the finished size of drill holes will be a nominal 3.625 inches in diameter. Upon the completion of drilling, a suite of geophysical logs will be run including natural gamma, gamma-gamma density, and resistivity.

After geophysical logging, the drill holes that will not be completed as piezometers will be filled with cement in stages to the surface. Those that will be piezometers will be cased and a screen section of casing installed in the Star Point beneath the Lower Hiawatha seam (Fig. 2).

The equipment that will be used varies with the phase of the project. During the preparation phase a dozer and grader will be used to repair Forest Development roads, upgrade Forest Development trails, and construct new roads and pads. During the drilling phase, depending on hole conditions and the current drilling task, one or two truck-mounted drilling rigs, a boom truck, an auxiliary air compressor, covered trailers, drill rod trays, mud tanks, and a geophysical logging truck will be used. The drilling rigs will cut core, install casing, install cement plugs, and complete holes as piezometers. The auxiliary air compressor will be used to aid circulation when hole conditions warrant. A boom truck will be used for placing equipment on the drill site. The geophysical logging truck will be used to make geophysical logs of the hole. During the support phase an equipment transport, boom truck, trackhoe, backhoe, supply trailers, water tanks, and pumps will be used. A 1,500 gallon and a 3,000 gallon water truck will be used to haul water to the water storage/pump site or drill sites if necessary. The supply trailers will carry drill steels, coring equipment, drilling additives, cutting and welding equipment, a doghouse, and other supplies. Storage tanks will be used to hold fresh water for drilling and used drilling fluid for later removal from the site. Pumps will be used to move the water. Water will be obtained from Muddy Creek, South Fork of Quitchumpah Creek, or North Fork of Quitchumpah Creek. All necessary temporary water rights changes will be obtained from the Utah State Engineer's office prior to any water usage.

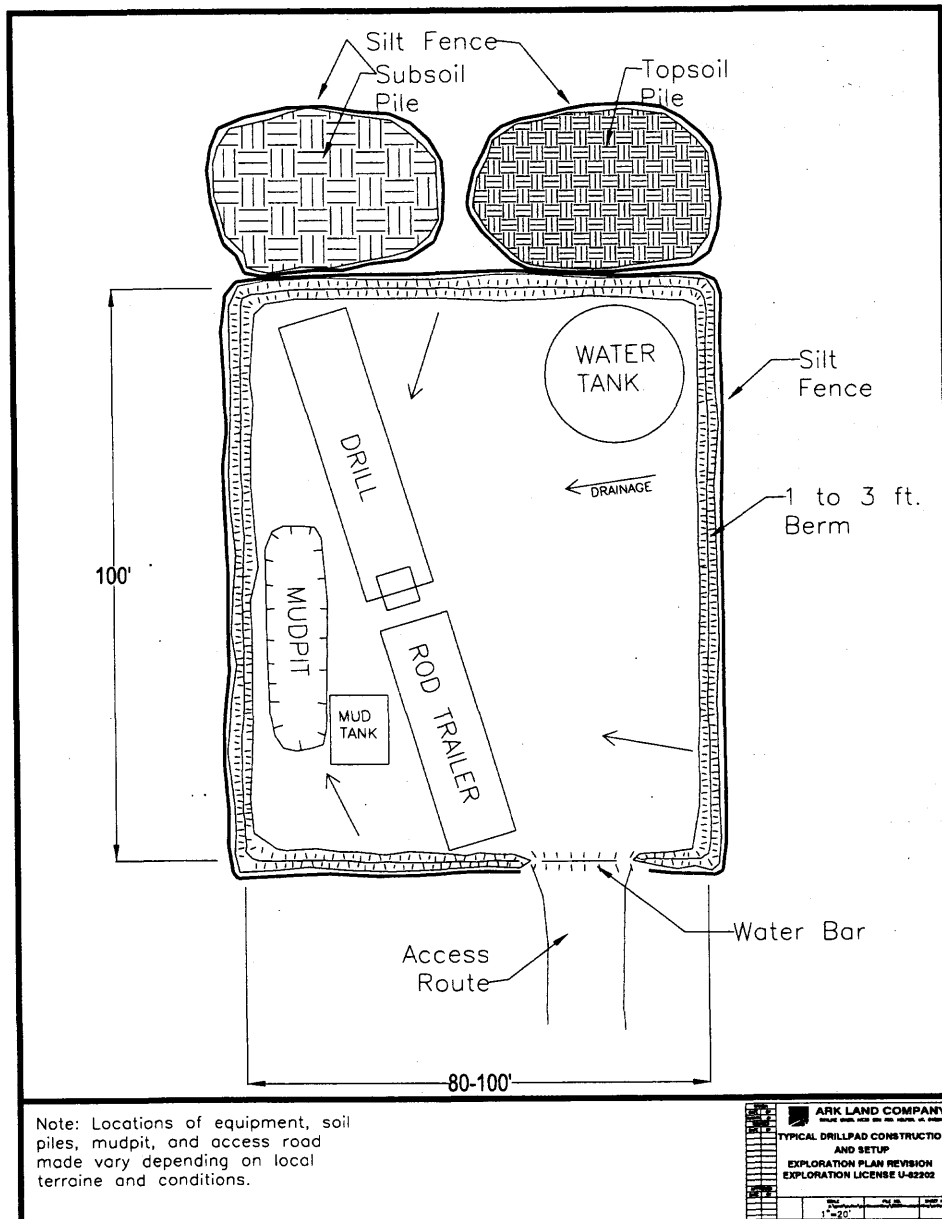


Figure 1: Typical truck-mounted drilling rig setup.

Backup and auxiliary equipment to be located at the staging area site will include, but not be limited to, drilling fluid containers, pallets of cement and drilling mud, two 4,000 gallon water trucks, a fuel truck or double lined fuel tank, four to six pickup trucks, a covered tool supply trailer, and a geophysical logging truck. One or two 18,000 gallon frac (fresh water) tank(s) and pump will be located at the water storage/pump site. The site will be approximately 40 ft x 80 ft in size. The pumps will be underlain by a pit liner, brattice, or drip pans.

Fresh water for drilling and road maintenance will be supplied by either hauling or pumping from the North Fork and/or South Forks of Quitcupah Creek or pumped and hauled from Muddy Creek. Water for road maintenance will either be pumped directly

from the North Fork and/or South Forks of Quitchupah Creek by the water truck or obtained from the frac tank at the frac tank/pump location.

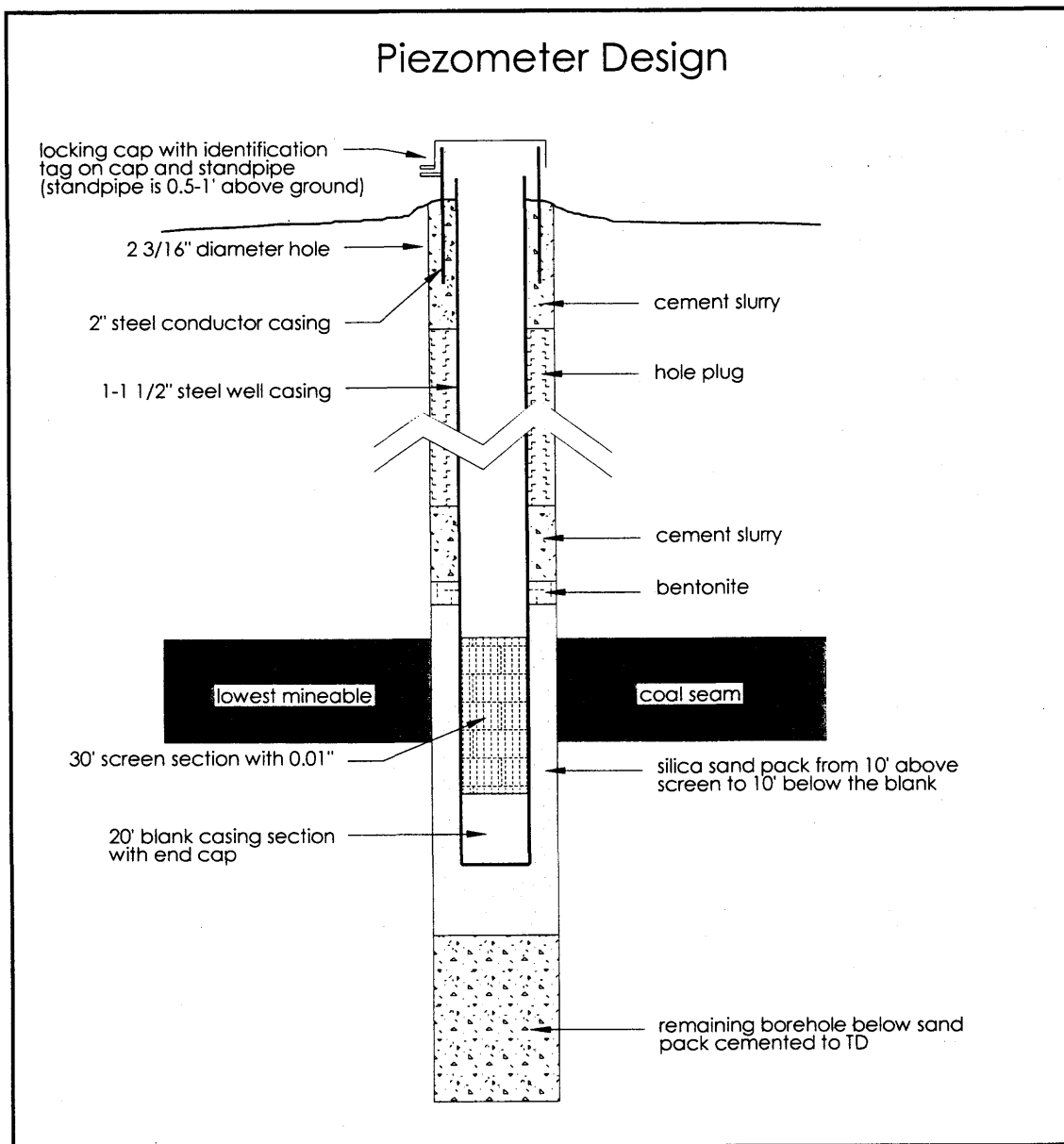


Figure 2: Piezometer design.

Geophysical Logging

Geophysical logs will be obtained in accordance with 10 CFR part 39. Data obtained during exploration will be furnished to the BLM as required in 43 CFR 3410.4. Ark Land Company requests that all data be kept confidential.

Equipment

A variety of equipment will be utilized during various phases of the exploration program. Some equipment will constantly be in the exploration license area while other equipment will only be in the area briefly. A description of the equipment by exploration phase is given in Table 3.

Travel and Transport of Equipment

The frequency equipment travels or is transported over U.S. Forest Service roads will vary. The estimated frequency and total number of trips during the project are given in Table 4. Some equipment will not travel or be transported on a regular basis because it will remain stationary once in the exploration license area or be used infrequently. The number of trips for this equipment is given on a project basis instead of on a weekly basis. Most of the equipment will not travel the full route from the Acord Lakes turn-off on a regular basis. Rather most equipment will only travel short distances within the exploration license area once transported to the area. A US Forest Service Road Use permit will be obtained before starting exploration activities.

Pickup/trailer combinations will be used for hauling supplies and small equipment, horses, or diesel fuel and each will average approximately 3 trips per week. An equipment transport (40,000 GVW) will be used to haul additional drilling equipment, such as water tanks (20,000 gallon frac tanks) and hole abandonment materials and will average approximately one trip per week.

Drill Hole Abandonment

The exploration drill holes will be abandoned by plugging with cement, cement/bentonite slurry, or Abandonite® from the bottom of the hole up to the surface. The abandonment method includes pulling surface casing when possible; but when not possible, cutting it flush with the ground, then pumping the plugging material through the drill pipe starting at the bottom of the hole. Plugging will then be done in stages by tripping-out of the hole 6-8 joints (60-80 ft) and pumping again. This process will be repeated to the surface. A brass identification tag will be placed in the concrete at the top of the drill hole stating the operator's name, drill hole number and legal description. The plugged hole will be flush with the ground surface.

Up to two drill holes will not be abandoned but rather be completed as piezometers. The completion method includes cleaning the hole of drill cuttings by circulating with air or water, inserting a 1 to 2 inch diameter steel casing with a 30 ft section of 0.01 in slot screen section with an end cap, filling the hole annulus in the screened section with washed sand or pea gravel, packing off the screened section or sealing it off with bentonite, then filling the remainder of the hole annulus to the surface with a cement or cement/bentonite slurry. A steel protective casing with locking cap will be placed 6 in to 1 ft above ground level. Figure 2 gives the design to be used in completing the

piezometer. Once the piezometers are no longer needed, they will be completely

Table 3 – Summary of Equipment Used in the Proposed Exploration License Area

<u>Phase</u>	<u>Equipment Type</u>	<u>Size or Capacity</u>	<u>Time in Area</u>	<u>Quantity</u>
Preparation	Equipment transport	20 ton	Brief	2
	Pickups, 4 wheel drive	½ to 1 ton	Constant	4
	Grader	D 14 Cat or similar	Brief	1
	Dozer	D 8 Cat or similar	Brief	1
Drilling	Wireline core rig	LS 244 or similar	Constant	3
	Water truck, small	1,500 gal	Constant	1
	Water truck, large	4,000 gal	Constant	2
	Pipe truck/transport	Semi, 40 ft flatbed	Constant	2
	Light plant, on trailer	5,000 watt	Constant	1
	Welder, on trailer	240 amp	Constant	1
	Tool trailer	2 ton	Constant	2
	Core trailer	2 ton	Constant	1
	Pickups, 4 wheel drive	½ to 1 ton	Constant	4
	ATV	1 person	Constant	3
	Geophysical logging truck	1 ton	Brief	1
Support	Pickups, 4 wheel drive	½ to 1 ton	Constant	4
	Track boom truck	D 8 Cat or similar	Constant	1
	Trackhoe	3 CY	Constant	1
	Backhoe	2 CY	Constant	1
	Frac tank with pump	18,000 gal	Constant	5
	Fuel truck/tank	2,000 gal	Constant	1
	Equipment transport	20 ton	Brief	2
	Triplex pump, skid mount	30 GPM	Constant	3
	Poly pipe winder, trailer	2,000 ft	Constant	1
	Boom truck, rear mount	3 ton	Constant	1
Reclamation	Equipment transport	20 ton	Brief	2
	Pickups, 4 wheel drive	½ to 1 ton	Constant	2
	Grader	D 14 Cat or similar	Brief	1
	Trackhoe	3 CY	Brief	1

plugged with a cement, cement/bentonite slurry, or Abandonite® to their full depth. The wellhead will be removed at the surface.

Table 4 – Estimated Frequency of Equipment Travel and Transport			
<u>Phase</u>	<u>Equipment Type</u>	<u>Quantity</u>	<u>Number of Trips</u>
			<u>Per Week</u>
Preparation	Equipment transport	2	1
	Pickup, 4 wheel drive	4	28
	Grader	1	1
Drilling	Wireline core rig	3	1
	Pipe rod truck	2	1
	Tool trailer	2	1
	Core trailer	1	1
	Water truck, small	1	1
	Water truck, large	2	21
	Pickup, 4 wheel drive	4	28
	ATV	3	28
	Geophysical logging truck	1	1
Support	Equipment transport	1	1
	Jet fuel trailer and tank	1	2
	Helicopter	1	2
	Pickup, 4 wheel drive	4	28
	Pickup and trailer combination	2	4
	Track boom truck	1	1
	Trackhoe	1	1
	Backhoe, rubber tired	1	1
	Frac tank with pump	5	1
	Fuel truck/tank	1	7
	Poly pipe winder	1	1
	Boom truck	1	1
Reclamation	Equipment transport	2	1
	Pickup, 4 wheel drive	2	14
	Grader	1	1
	Trackhoe	1	1

Reclamation

Reclamation work will begin as soon as possible after drilling activities are completed. Reclamation will not be needed for the Forest development roads. They will be bladed and returned to a condition equal to or better than their condition prior to the start of exploration. Reclamation of the reopened Forest development trail (025), reopened double-track road, newly constructed temporary access routes, and drill sites will be done with a dozer, grader, and trackhoe. The mud pits will be backfilled after cuttings have dried. The pit liner will be buried with the cuttings. The subsoil will then be replaced separately, followed by replacing the topsoil separately to bring the disturbed area back to

approximate original contour. The grubbed vegetation will then be scattered on the surface and the surface reseeded with the approved U.S. Forest Service seed mix. The reclaimed access routes will be barricaded and signed such that no other traffic will utilize the routes. The staging area and storage tank/pump location will be scarified then reseeded with the approved U.S. Forest Service seed mix. A summary of the disturbed areas is given in Table 2.

The seed mix to be used is the same mix used for the 2005 Muddy drilling project and is given below:

		<u>Pounds/Ac PLS</u>
Western Wheat grass	Elymus smithii	2.00
Basin Wild Rye	Elymus cinereus	1.00
Intermediate Wheat grass	Elymus hispidus	2.00
Yellow Sweet Clover	Melilotus officinalis	1.00
Rambler Alfalfa	Medicago sativa	1.00
Blue Leaf Aster	Aster glaucodes	0.25
Lewis Flax	Linum lewisii	0.50
Small Burnet	Sanguisorbia minor	1.00
Silvery Lupine	Lipinus argenteus	1.00
True Mahogany	Cercocarpus argenteus	1.00
Bitterbrush	Purshia tridentate	1.00

TOTAL 11.75 PLS

Prior to any seeding, the USFS will be consulted to ensure the proper seed mixture is used.

During all phases of exploration trash and debris will not be allowed to accumulate but rather will be removed from all drill sites, access routes, and roads on a regular basis and be disposed of in an approved sanitary landfill. Excess drill cuttings and drill core that is not buried in the mudpit will be transported by truck to Canyon Fuel Company's approved waste rock site along the Sufco mine haul road.

Water Rights

Water for drilling and road maintenance will be obtained from Muddy Creek and/or Quitchumpah Creek. All necessary arrangements including a Temporary Change Permit will be made with shareholders and the Utah Division of Water Rights.

Other Permits

Permits will be obtained from other agencies and parties as required.

Surveying

The drill holes will be surveyed to within 0.01 foot horizontal location and 0.1 ft. vertical elevation. Locations will be expressed in state plane coordinates adjusted to sea level in the NAD 83 datum.

Bonds

Bonds will be secured as required by the BLM and other agencies.

Transfer or Modification of Drill Holes

Ark Land Company does not intend to transfer any interest in any of the drill holes proposed in this exploration program. Up to two drill holes will be completed for use as piezometers as described previously and will remain under the control of Ark Land Company. No existing drill holes will be modified in this exploration program.

Safety

Drilling and construction contractors, Ark Land/Canyon Fuel employees and their representatives, and other contractors will be required to wear hard hats, steel toed boots, and safety glasses when working at the drillsites and the staging area.

Appropriate fire fighting equipment and an adequate water supply will be maintained at the drillsites and the staging area as well as any water pumping locations. USFS fire stipulations will be followed. Internal combustion engines will be equipped with appropriate mufflers and/or spark arrestors. All vehicles will carry a readily available and fully charged fire extinguisher and a first aid kit, as well as fire fighting tools. Large equipment will not be moved, supplies or materials transported, nor personnel allowed to drive onto or within the area when roads are excessively muddy.

43 CFR 3482.1(a)(3)(v) - Estimated Timetable

The proposed drilling project should require one year to complete. The general schedule will be to begin in early June and continue to late September. Table 5 shows the projected timetable for each phase of the program. The preparation phase includes tasks such as repair of Forest development roads and trails, preparation of drill sites, transporting and setting-up frac tanks and water pumps, laying water lines, and geological support. The combined drilling and support phases includes tasks such as transporting supplies, drilling equipment, and the drilling rig(s), hauling water, drilling, plugging or completing drill holes, geological support, and geophysical logging. The reclamation phase includes restoring and reseeding the reopened Forest Development Trail, reopened double track, newly constructed roads, and drill sites, scarifying and reseeding the staging area site, water storage/pump site, and removing equipment and water lines. Reclamation will be as concurrent with the other phases as possible.

Table 5. Projected timetable

TASK	JUNE	JULY	AUG	SEPT
Preparation				
Drilling and support				
Reclamation				

43 CFR 3482.1(a)(3)(vi) - Amount of Coal Removed

Ark land Company intends to cut 2.4 inch diameter (HQ) coal core from each mineable coal seam. The total amount of coal removed will be less than 300 lbs. This amount was estimated by calculating the volume of coal core cut and dividing this number by the density of the coal. The coal core will be used for chemical and physical analysis.

43 CFR 3482.1(a)(3)(vii) – Compliance with 43 CFR 3484.1(a) and 30 CFR 815.15

The requirements of 43 CFR 3484.1(a) will be complied with as follows:

43 CFR 3484.1(a)(1)-All applicable requirements of the surface management agency, 30 CFR 815.15, and the approved State program will be complied with.

43 CFR 3484.1(a)(2)-Ark Land Company will set and cement both a conductor and surface casing as described in the Drilling section. It is expected that the authorized officer will not require blow out prevention equipment because the drill holes will not reach depths where prospectively valuable oil, gas, or geothermal resources would be encountered.

43 CFR 3484.1(a)(3)-Drill holes will be capped and plugged as described previously which meets the requirements of this section.

43 CFR 3484.1(a)(4)-Ark Land Company will retain all drill and geophysical logs for at least one year and shall make them available for inspection, if requested by the authorized officer. At this time, the authorized officer has not requested that samples of drill core be retained. Ark Land Company requests that this information be held confidential pursuant to 43 CFR 3481.3.

43 CFR 3484.1(a)(5)-Ark Land Company intends to complete up to two exploration drill holes as piezometers (surveillance wells) pending the approval of the authorized officer.

Ark Land Company will comply with the requirements of 30 CFR 815.15 as follows:

30 CFR 815.15(a)-Habitats of unique or unusually high value for fish, wildlife, and other related environmental values and critical habitats of threatened or endangered species identified pursuant to the Endangered Species Act of 1973 (16 USC 1531 *et seq*) will not be disturbed during coal exploration. Ark Land will conduct the necessary

surveys to locate these habitats so that impacts to them may be avoided as described previously.

30 CFR 815.15(b)-Roads or other transportation facilities shall comply with 30 CFR 816.150(b) through (f). Sections 30 CFR 816.180 and 30 CFR 816.181 are not applicable because utility installations and support facilities will not be used.

30 CFR 815.15(c)-All excavations created during exploration shall be returned to the approximate original contour promptly after no longer needed as described in the Reclamation section.

30 CFR 815.15(d)-Topsoil shall be separately removed, stored, and redistributed on areas disturbed by coal exploration activities as described in the Reclamation section.

30 CFR 815.15(e)-All areas disturbed by coal exploration activities shall be revegetated in a manner that encourages prompt revegetation and recovery of a diverse, effective, and permanent vegetative cover. The vegetative cover will be capable of stabilizing the soil surface from erosion.

30 CFR 815.15(f)-This section is not applicable because no diversions will be made.

30 CFR 815.15(g)-All drill holes shall be reclaimed. Each drill hole will be cased, sealed, or otherwise managed per 30 CFR 816.13 and when no longer needed, shall be capped, sealed, backfilled, or otherwise properly managed per 30 CFR 816.15. 30 CFR 816.14 is not applicable because none of the drill holes will be used to return coal processing waste or water to underground workings.

30 CFR 815.15(h)-All equipment and facilities shall be promptly removed from the exploration area when they are no longer needed for exploration.

30 CFR 815.15(i)-Coal exploration shall be conducted in a manner which minimizes disturbance to the prevailing hydrologic balance in accordance with the applicable portions of sections 30 CFR 816.41 through 816-49.

30 CFR 815.15(j)-This section is not applicable because acid- and toxic-forming materials generally will not be encountered or, if encountered, will be in such small amounts as not to pose a threat.

43 CFR 3482.1(a)(3)(viii) – Map

Map 1 shows the general location of the proposed exploration license area, drill sites, and access routes and is included in the text of this exploration plan. Map 2 is a larger scale map of the same area that gives more detail on the areas to be affected by the proposed exploration and reclamation and is included with this exploration plan.

43 CFR 3482.1(a)(3)(ix) – Surface Owner Other Than the United States

There are no surface owners other than the United States in the exploration area. The surface ownership is administered by the US Department of Agriculture Forest Service.

43 CFR 3482.1(a)(3)(x) – Other Data

No other data has been requested by the BLM at this time.

